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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,881	10/12/2004	Che-Chieh Wang	VIAP0112USA	5880

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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
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MERRIFIELD, VA 22116

EXAMINER

PHAM, VAN T

ART UNIT	PAPER NUMBER
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2627

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	04/18/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/18/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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2 ✓

Office Action Summary

Application No.

10/711,881

Applicant(s)

WANG, CHE-CHIEH

Examiner

VAN T. PHAM

Art Unit

2627

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (AAPA) in view of Kato Tatsuya (JP 2003-085751).

Regarding claim 1, AAPA discloses a method for modifying a 2T write strategy on an optical disk drive, the method comprising:

- (a) forming a test odd mark and a test even mark on an optical disk (see Figs. 2-3);
- (b) detecting signal waveforms associated with the test odd mark and the test even mark (see Figs. 2-3); and

Kato discloses a method for modifying a write strategy on an optical disk drive, the method comprising: (c) when a first timing offset is detected between a timing occurring the maximum signal strength in the signal waveform associated with the test even mark and a timing occurring the maximum signal strength in a first ideal waveform, adjusting a plurality of writing periods used for forming an even mark according to the first timing offset; and when a second timing offset is detected between a timing occurring the maximum signal strength in the signal waveform associated with the test odd mark and a timing occurring the maximum signal strength

in a second ideal waveform, adjusting a plurality of writing periods used for forming an odd mark according to the second timing offset (see Kato Fig. 1-3).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide a write strategy in AAPA as suggested Kato, the motivation being in order to have an optical recording medium suitable for realizing a high data transfer rate.

Regarding claims 2 and 10, the combination AAPA and Kato, discloses the method of claim 1 wherein the step (c) further comprises: when forming the even or odd mark on the optical disk, using a first writing period and a second writing period to output a write power, the first writing period and the second writing period having different lengths (see Kato Figs. 2-9).

Regarding claims 3 and 11, the combination AAPA and Kato, discloses the method of claims 2, 10, respectively wherein the first writing period comprises a length for outputting the write power to the optical disk, and the second write period comprises a length for outputting a bias power to the optical disk (see Kato Figs. 2-9).

Regarding claims 4 and 12, the combination AAPA and Kato, discloses the method of claim 1 wherein the step (c) further comprises: when forming the even or odd mark on the optical disk, using a first writing period, a second writing period and a third writing period to output a write power, the second writing period being between the first writing period and the third writing period, and the first writing period, the second writing period and the third writing period having different lengths (see Kato Figs. 2-9, table 3).

Regarding claims 5 and 13, the combination AAPA and Kato, discloses the method of claims 4, 12, respectively, wherein the first writing period comprises a length for outputting the write power to the optical disk, the second writing period comprises a length for once again

outputting the write power to the optical disk, and the third writing period comprises a length for outputting a bias power to the optical disk (see Kato Figs. 2-9, table 3).

Regarding claims 6 and 14, the combination AAPA and Kato, discloses the method of claim 1 wherein the step (c) further comprises: when forming the even or odd mark on the optical disk, using a first writing period, a plurality of second writing periods and a third writing period to output a write power, the plurality of the second writing periods being between the first writing period and the third writing period, each of the second writing periods being the same in length, and the first writing period, one of the second writing periods and the third writing period having different lengths (see Kato Figs. 2-9 and table 3, inherently, see AAPA Figs. 2-3).

Regarding claims 7 and 15, the combination AAPA and Kato, discloses the method of claims 6, 14, respectively, wherein the first writing period comprises a length for outputting the write power to the optical disk, each of the second writing periods comprises a length for once again outputting the write power to the optical disk, and the third writing period comprises a length for outputting a bias power to the optical disk (see Kato Figs. 2-9 and AAPA Figs. 2-3).

Regarding claim 8, the combination AAPA and Kato, discloses the method of claim 1 wherein the step (c) uses a firmware of the optical disk drive to set up the writing periods used for forming the odd mark and the even mark (see AAPA Fig. 1).

Regarding claims 9 and 16, the combination AAPA and Kato, discloses the method of claim 1 wherein the step (c) shortens the total lasting time of the writing periods used for forming the even or odd mark when the timing occurring the maximum signal strength in the signal waveform associated with test even mark lags behind the timing occurring the maximum signal strength in the first ideal waveform, and the step (c) lengthens the total lasting time of the

writing periods used for forming the even or odd mark when the timing occurring the maximum signal strength in the signal waveform associated with the test even mark leads the timing occurring the maximum signal strength in the first ideal waveform (see AAPA Fig. 2-3 and Kato Figs. 2-9).

Regarding claim 17, the combination AAPA and Kato, discloses an optical disk drive comprising:

an optical pick-up unit (OPU) for outputting a laser beam to burn a plurality of odd marks and a plurality of even marks on an optical disk (see AAPA Fig. 1 and Kato Fig. 1). ; and

a controller connected to the optical pick-up unit, the controller being capable of driving the optical pick-up unit according to a 2T write strategy, and controlling the optical pick-up unit to use a plurality of writing periods comprising at least triple a base period to output the laser beam to burn an odd mark and an even mark on the optical disk (see AAPA Figs. 1-3 and Kato Figs. 1-9).

Regarding claim 18, the combination AAPA and Kato, discloses the optical disk drive of claim 17 further comprising a detector connected to the controller, the detector being capable of notifying the controller how to adjust the writing periods according to the information obtained from reading the odd marks and the even marks by the optical pick-up unit (see AAPA Fig. 1 and Kato Fig. 1).

Regarding claim 19, the combination AAPA and Kato, discloses a calibration system for an optical disk drive comprising: a detector for analyzing profiles and distributions of different marks recorded on an optical disk; and an adjuster connected to the detector and an optical pick-up unit, the adjuster being capable of

adjusting a plurality of writing periods used by the optical pick-up unit according to the information analyzed by the detector, the writing periods comprising at least triple a base period and being used by the optical pick-up unit to output a laser beam for forming an odd mark and an even mark on the optical disk (see rejection above of claims 1 and 17).

Regarding claim 20, the combination AAPA and Kato, discloses the calibration system of claim 19 wherein a rule adopted by the adjuster to adjust the plurality of the writing periods comprises: when a characteristic curve of a mark reveals a maximum value prior to an ideal characteristic curve, increasing the total recording time for forming the mark; when a characteristic curve of a mark reveals a maximum value later than an ideal characteristic curve, reducing the total recording time for forming the mark; and when a characteristic curve of a mark becomes wider or narrower than an ideal characteristic curve, adjusting the total recording time for forming the mark according to a try-and-error method (see Kato Figs. 1-9 and table 3).

Cited References

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The cited references relate to write strategy parameters that are varied on a mark by mark basis and other write strategy parameters that is varied slowly.

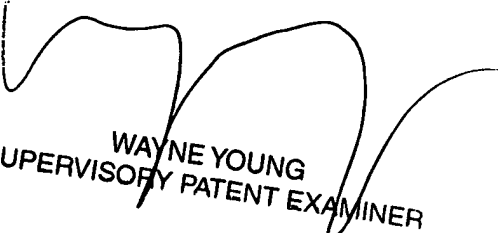
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to VAN T. PHAM whose telephone number is 571-272-7590. The examiner can normally be reached on Monday-Thursday from 9:00am-6:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young be reached on 571-272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP



WAYNE YOUNG
SUPERVISORY PATENT EXAMINER